

Assignment 3

Textbook Assignment: "Canopy System"; "Pressurization and Air-conditioning Systems." 2-8 through 3-2.

Learning Objective:
Recognize the operation, emergency jettison procedures, and components of the sliding canopy system.

3-1. What type of canopy is used on the A-6A aircraft, and which of the following methods is normally used to open and close it?

1. Clamshell, manual
2. Sliding, electrical
3. Sliding, hydraulic
4. Clamshell, pneumatic

3-2. When the canopy will not open by its normal system, it can be opened by what other method?

1. Pneurnatically with the emergency switch
2. Electrically with the emergency switch
3. Mechanically through linkages
4. Hydraulically with the hand pump system

3-3. When the canopy is emergency jettisoned, what method is used to fire the jettison cartridge?

1. Electrical
2. Pneumatic
3. Hydraulic
4. Manual

3-4. From how many positions on the aircraft can the canopy jettison cartridge be fired?

1. One
2. Two
3. Three
4. Four

3-5. (Refer to figure 2-7 in the text.) What valve prevents air battle pressure from escaping overboard if a leak develops in the air filler valve?

1. Check
2. Relief
3. Air release
4. Vent bleeder check

3-6. Should leakage occur in any one of the air release valves, what prevents inadvertent firing of the jettison cartridge?

1. The check valve
2. The relief valve
3. The flow regulator
4. The vent bleeder valve

3-7. What is the purpose of the manual override feature on the vent bleeder valve in the jettison system?

1. To bleed off pressure after testing the system
2. To bleed off excessive, pressure that builds up after servicing the system
3. To bleed off excessive pressure that builds up from thermal expansion in the system
4. To vent excess pressure overboard during servicing of the svstem

Learning Objective:
Recognize the purpose and operation of the canopy seal system.

3-8. A canopy seal system provides an airtight seal between the canopy assembly and the aircraft structure to maintain cockpit pressurization.

1. True
2. False

- 3-9. The canopy seal regulator performs which of the following functions?
1. Provides 80 psi pressure in the canopy seal when the canopy is unlocked
 2. Provides 80 psi pressure in the canopy seal when the canopy is locked
 3. Provides 25 to 30 psi above ambient when the canopy is unlocked
 4. Provides 25±5 psi pressure above ambient when the canopy is closed and locked
- 3-10. The venting of pressure through the relief/vent port of the canopy seal regulator will occur when which of the following events happen?
1. When the service air heat exchanger has supplied approximately 80 psi pressure to the canopy seal regulator
 2. When the service air heat exchanger has supplied approximately 25 to 30 psi pressure to the canopy seal regulator
 3. When the canopy is unlocked
 4. When the pressure downstream of the regulator is between 6 to 8 psi
- 3-11. What valve in the electrically actuated canopy seal prevents pressure from becoming excessive during rapid altitude changes?
1. Dump
 2. Relief
 3. Outflow
 4. Shutoff
- 3-12. Electrical failure of the canopy seal system will cause which of the following actions to occur?
1. The relief valve will close
 2. The dump switch solenoid will energize
 3. The solenoid valve will energize
 4. The regulator valve will dump
- 3-13. (Refer to table 2-1 in the text.) During a ground test on an electrically actuated canopy seal system you find that the seal will not inflate. If you determine that all controls pertinent to the proper operation of the seal have been activated, which of the following conditions could cause the trouble?
1. A ruptured seal
 2. A defective canopy seal regulator or check valve
 3. A defective power supply circuit to the seal regulator
 4. Each of the above
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- Learning Objective:
Recognize the purpose and operation of a frangible escape system.
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- 3-14. A frangible escape system is used to jettison the canopy on the S-3A aircraft?
1. True
 2. False
- 3-15. The S-3A canopy glass is removed during ejection by what device(s)?
1. Glass cutters
 2. Glass crushers
 3. Breaker plates
 4. Both 2 and 3 above
- 3-16. What is the approximate length of the external jettison initiator cable on the S3 aircraft?
1. 6 feet
 2. 8 feet
 3. 10 feet
 4. 12 feet
- 3-17. Which of the following parts will be blown away from the aircraft when either of the external handles is pulled?
1. Hatches
 2. Fillets
 3. Supports
 4. All of the above

3-18. What total number of internal initiators are in the canopy and hatch jettison system?

1. Five
2. Two
3. Three
4. Four

3-19. What device prevents the internal jettison handle from being squeezed and pulled?

1. Shear pin
2. Safety pin
3. Shear wire
4. Safety guard

3-20. What is the total number of SMDC initiator handles in the S-3A aircraft?

1. Five
2. Six
3. Three
4. Four

3-21. Which, if any, of the following actions will initiate the SMDC when safety pins are installed?

1. Drilling
2. Filing
3. Hammering
4. None

Learning Objective:

Recognize the service life and expiration dates of cartridges and cartridge-activated devices (CAD).

IN ANSWERING QUESTIONS 3-22 THROUGH 3-25, SELECT THE PUBLICATION NAME FROM FIGURE 3-1 ABOVE, WHICH RELATES TO THE PUBLICATION NUMBER USED AS THE QUESTION.

3-22. NAVAIR 11-85-1.

1. A
2. B
3. C
4. D

3-23. OP 4.

1. A
2. B
3. C
4. D

3-24. OP 5

1. A
2. B
3. C
4. D

3-25. NAVAIR 11-100-1.

1. A
2. B
3. C
4. D

3-26. The specific period of time that a CAD is allowed to be used is called its

1. shelf life
2. service life
4. installed life
5. removed life

3-27. What date must be checked prior to installing a CAD into any system?

1. Open
2. Service life expiration
3. Installed
4. Manufacture

3-28. To determine the service-life expiration date of a CAD, what date(s) must be computed?

1. Aircraft life
2. Shelf life
3. Installed life
4. Both 2 and 3 above

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| (A) | Description, Preparation For Use, and Handling Instructions, Aircrew Escape Propulsion System (AEFS) Devices |
| (B) | General Use Cartridges and Cartridge-Actuated Devices for Aircraft and Associated Equipment |
| (C) | Ammunition Afloat |
| (D) | Ammunition and Explosives Ashore |

Figure 3-1

- 3-29. If the date of manufacture of a CAD is 0981 and the shelf life is 6 years, what is its shelf life expiration date?
1. 0985
 2. 0986
 3. 0987
 4. 0988
- 3-30. To which of the following manuals should you refer to determine the installed-life expiration date of a CAD?
1. NAVAIR 11-100-1
 2. NAVAIR 11-85-1
 3. OP 4
 4. OP 5
- 3-31. To determine the installed-life expiration date, the installed-life date is added to the date the container was subjected to what action?
1. Opened
 2. Received from supply
 3. Received from the manufacturer
 4. Sealed by the manufacturer
- 3-32. If the installed life is 66 month, what is the installed-life expiration date of a CAD whose container was opened during 1183?
1. 0588
 2. 0688
 3. 0589
 4. 0689
- 3-33. After the shelf life and installed life dates have been computer, the earlier date will be used for CAD service-life expiration date.
1. True
 2. False
- 3-34. A hermetically sealed container was opened on 15 March. Which of the following dates is used to compute the expiration date?
1. 1 January
 2. 1 March
 3. 15 March
 4. 31 March
- 3-35. Scribing is an approved method for marking expiration dates on CADs
1. True
 2. False
- 3-36. Which of the following dates must be marked on a CAD that is being installed in an aircraft?
1. Installed
 2. Shelf life
 3. Container opened
 4. Installed life
- 3-37. A logbook entry for a CAD must be made-when which of the following events occurs?
1. Actuation
 2. Replacement
 3. Reinstallation
 4. Refurbishment
- 3-38. A contingency service-life extension for a CAD granted by the commanding officer may not exceed what maximum number of days?
1. 15
 2. 30
 3. 45
 4. 60
- 3-39. An additional service-life extension beyond the contingency extension may be requested by message from which of the following activities?
1. NAVORDSTA
 2. NAVAIRLANT
 3. NAVAIRSYSCOM
 4. NAVORDSYSCOM
- 3-40. A change to NAVAIR 11-100-1 may change the permanent service life of CADs. Which of the following methods is used to change NAVAIR 11-100-1.
1. Rapid action change
 2. Interim rapid action change
 3. Formal change
 4. Each of the above

Learning Objective:
Identify CAD Maintenance policy to include SMDC and FCDC maintenance and inspection requirements and safety precautions.

- 3-41. The service life of wire-braid, Teflon®-hoses is the same as the service life of what associated item?
1. The initiator to which it is attached
 2. The aircraft in which it is installed
 3. The CAD to which it leads
 4. The rocket motor to which it leads
- 3-42. Hoses in an escape system should be inspected how often?
1. At every phased inspection
 2. Upon removal of the seat
 3. After the bases are disconnected
 4. Each of the above
- 3-43. For safety reasons, which of the following devices will be installed in CADs when CADs are removed from an aircraft?
1. Caps
 2. Plugs
 3. Safety pins
 4. Each of the above

<p>A. 0.10 inch B. 0.25 inch C. 0.75 inch D. 1.00 inch</p>
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Figure 3-2

IN ANSWERING QUESTIONS 3-44 THROUGH 3-48, SELECT THE CLEARANCE FROM FIGURE 3-2 ABOVE, WHICH SHOULD BE USED FOR THE STRUCTURAL DESCRIPTION PROVIDED IN THE QUESTION. CLEARANCES USED IN FIGURE 3-22 MAY BE USED MORE THAN ONCE.

- 3-44. A supported section of SMDC and the adjacent structure.
1. A
 2. B
 3. C
 4. D
- 3-45. Straight unsupported sections of SMDC and the adjacent structure.
1. A
 2. B
 3. C
 4. D
- 3-46. Two parallel SMDCs.
1. A
 2. B
 3. C
 4. D
- 3-47. Unsupported sections of SMDC and any operating mechanism.
1. A
 2. B
 3. C
 4. D
- 3-48. A supported section of SMDC and an electrical wire bundle.
1. A
 2. B
 3. C
 4. D
- 3-49. When using the detonating card inspection gauge set to check the booster tip, what action, if any, should you take if the bar does not touch both sides of the gauge?
1. Replace the tip
 2. File the tip
 3. Replace the booster
 4. None
- 3-50. When using one CAD from a two-CAD set, what information should you mark on the unused CAD?
1. Shelf life
 2. Expiration date
 3. Container open date
 4. Both 2 and 3 above

3-51. Which of the following actions causes CADs to stick?

1. Overtorquing during installation
2. Using incorrect tools
3. Using incorrect lubricants
4. Each of the above

Learning Objective:
Identify the reason for the ordnance certification program.

3-52. What manual provides the guidelines for an ordnance certification program?

1. OPNAVINST 8023.2
2. OPNAVINST 8024.2
3. OPNAVINST 8324.3
4. OPNAVINST 8024.9

3-53. All personnel handling live ammunition must be qualified and certified in accordance with OPNAVINST 8023.2?

1. True
2. False

3-54. All ordnance certified personnel must be frequently instructed in which of the following areas?

1. Safety precautions
2. Methods of handling
3. Storage and uses of the ammunition or explosives
4. Each of the above

3-55. New or inexperienced personnel must be under the direct and constant supervision of skilled, experienced, and certified personnel.

1. True
2. False

3-56. Personnel who supervise or perform work in connection with handling, inspection, installation, and care of cartridges must observe which of the following restrictions?

1. Ensure that all applicable regulations are rigidly observed
2. Carefully supervise the activities of all subordinate personnel
3. Inform all personnel of the constant need for using the utmost vigilance in the performance of their work
4. Each of the above

Learning Objective:
Recognize the affect high altitude flight could have on flight personnel because of decreased atmospheric pressure.

2-57. Without the use of pressurized aircraft cabins, crew members would not get enough oxygen at higher altitudes. Which of the following factors is responsible for this?

1. As altitude increases the content of inert gases in the air increases, therefore, less oxygen is taken into the body during the breathing process
2. As altitude increases oxygen content increases along with atmospheric pressure, but not in proportion; therefore, less oxygen is taken into the body during the breathing process
3. As altitude increases, atmospheric pressure and oxygen content of the air decreases, resulting in less oxygen being taken into the body during the breathing process
4. As altitude increases air density increases resulting in less oxygen being taken into the body during the breathing process

3-58. The lowest outside air temperature encountered by an aircraft will occur at a altitude of about

1. 1 mile
2. 5 miles
3. 3 miles
4. 7 miles

3-59. Various sections of an aircraft are pressurized for which of the following reasons?

1. To provide for the proper operation of all aircraft electrical components
2. To provide for the proper operation of specific aircraft components only
3. To provide for the survival of personnel in a high altitude environment only
4. To provide for personnel survival at high altitudes and the proper operation of specific aircraft components

3-60. In addition to aerodynamic heating, other factors affecting cabin/cockpit temperatures are engine heat, solar heat, heat from electrical units, and heat from the body.

1. True
3. False

3-61. What is the maximum temperature a person can withstand for extended periods while still maintaining efficiency?

1. 85°F
2. 80°F
3. 75°F
4. 70°F